AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. **(Currently Amended)** A boost converter for use in a transceiver to generate an output voltage that is greater than a voltage available to the boost converter, the boost converter comprising:

an inductor adapted to couple a first end of the inductor to a power supply;

a switch that is adapted to couple a second end of the inductor to the return of the power supply when the switch is closed;

a diode coupled at an anode of the diode to the second end of the inductor;

a capacitor coupled to a cathode of the diode and adapted to couple to the return of the power supply, the capacitor adapted to maintain an output voltage that is supplied to a load, wherein the load is an electrical component residing in the transceiver;

a microprocessor for monitoring the output voltage, wherein the microprocessor generates a pulse width modulated signal in response to both the output voltage and ~~a characteristic of the electrical component~~wherein the microprocessor also controls a function of the transceiver separate from the boost converter; and

a gate coupled to the pulse width modulated signal and to a pulse train, the gate producing a modulated pulse train, the gate further coupled to the switch such that the modulated pulse train can be used to control the switch and move the output voltage to a target voltage.

2. **(Original)** The boost converter set forth in claim 1, the pulse train being a signal between about 500 kHz and 10 MHz.

3. **(Original)** The boost converter set forth in claim 1, the pulse width modulated signal being a signal between about 10 kHz and 1 MHz.

4. **(Original)** The boost converter set forth in claim 1, wherein the gate is at least one of an AND gate, a transistor switch, and a field effect transistor.

5. **(Original)** The boost converter set forth in claim 1, further comprising an analog to digital (A/D) converter coupled between the output voltage and the microprocessor to derive a signal usable as a feedback signal by the microprocessor.

6. **(Previously Presented)** The boost converter set forth in claim 5, further comprising a voltage reduction circuit coupled between the output voltage and the A/D converter to derive a signal that is at a level that is supported by the A/D converter.

7. **(Previously Presented)** The boost converter of claim 6, wherein the voltage reduction circuit is a voltage divider.

8. **(Original)** The boost converter of claim 5, wherein the A/D converter is comprised of the microprocessor.

9. **(Original)** The boost converter of claim 1, wherein the switch is a field effect transistor.

10. **(Currently Amended)** A boost converter for use in a transceiver to generate an output voltage that is greater than a voltage available to the boost converter from a power supply, the boost converter comprising:

means for providing an inductance coupled to a power supply;

means for switching coupled to the induction means, the means for switching adapted to allow a current to flow from the power supply through the induction means;

means for storing coupled through a means for blocking to the induction means, the means for storing adapted to maintain an output voltage caused by current flowing through the means for blocking to the means for storing, the output voltage powering a load, wherein the load is an electrical component residing in the transceiver;

means for controlling coupled to the means for storing, the means for controlling being adapted to monitor output voltage across the means for storing for generating a control signal to control the means for switching based on both the output voltage across the means for storing and at least one characteristic of the load, the means for controlling being further adapted to control a function of the transceiver separate from the boost converter; and

means for gating coupled to the means for controlling and the means for switching, the means for gating using the control signal to modulate a pulse train to control the means for switching.

11. **(Original)** The transceiver boost converter as set forth in claim 10, further comprising a means for digitizing coupled between the means for storing and the means for controlling, the means for digitizing adapted to derive a signal from the output voltage that is useable by the means for controlling.

12. **(Previously Presented)** A transceiver comprising:

a boost converter for use in the transceiver to generate an output voltage that is greater than a voltage of a power supply available to the boost converter, the boost converter comprising:

a capacitor used to generate an output voltage, wherein the capacitor is coupled to an inductor through a diode, the output voltage for powering a load, wherein the load is an electrical component residing in the transceiver;

a switch that is coupled to the diode and the inductor such that current flows through the diode and the capacitor when the switch is off and such that current flows through the switch when the switch is on;

a microprocessor that is programmably configured to monitor the output voltage of the load and that generates a pulse width modulated signal in response to the output voltage, and controls at least one other function of the transceiver not associated with the boost converter; and

a gate generates a modulated pulse train by gating the pulse width modulated signal with a pulse train, wherein the modulated pulse train turns the switch on and off in a manner that raises the output voltage to a target voltage, the target voltage being at least partially dependent on the monitored temperature.

13. **(Previously Presented)** A transceiver as defined in claim 12, wherein the gate is one of an AND gate, a transistor switch, and a field effect transistor.

14. **(Previously Presented)** A transceiver as defined in claim 12, wherein the pulse width modulated signal being a signal between about 10 kHz and 1 MHz.

15. **(Previously Presented)** A transceiver as defined in claim 12, wherein the pulse train signal is between about 500 kHz and 10 MHz.

16. **(Previously Presented)** A tranceiver as defined in claim 12, wherein the switch is a field effect transistor, wherein a gate of the field effect transistor is connected to the modulated pulse train.

17. **(Previously Presented)** A transceiver as defined in claim 12, further comprising an analog to digital (A/D) converter coupled between the output voltage and the microprocessor to derive a signal usable as a feedback signal by the microprocessor.

18. **(Previously Presented)** A transceiver as set forth in claim 17, further comprising a voltage reduction circuit coupled between the output voltage and the A/D converter to derive a signal that is at a level that is supported by the microprocessor.

19. **(Previously Presented)** A transceiver as set forth in claim 18, wherein the voltage reduction circuit is a voltage divider.

20. **(Previously Presented)** A method of generating a voltage in a transceiver for a load comprised of a diode used in the transceiver, the load diode requiring a voltage greater than voltages available to the transceiver via an external power supply, the method comprising:

receiving a current from a power supply;

passing the current through an inductor;

passing the current from the inductor through a diode;

passing the current from the diode through a capacitor to create an output voltage for powering the load diode;

feeding at least a portion of the output voltage into a microprocessor;

at the microprocessor, generating a pulse width modulated signal in response to the output voltage, wherein the microprocessor also controls a function of the transceiver not associated with the boost converter;

gating the pulse width modulated signal with a pulse train to produce a modulated pulse train; and

controlling a switch with the modulated pulse train, the switch connected to the inductor such that the current passes through the inductor and the switch to ground when the switch is on and such that stored energy in the inductor causes the current to pass through the diode further through the capacitor when the switch is switched from on to off, thereby controlling the output voltage being supplied to the load diode.

21. **(Original)** The method of claim 20, wherein feeding at least a portion of the output voltage into a microprocessor further comprises:

feeding the output voltage into an analog to digital converter; and

feeding the output of the analog to digital converter into the microprocessor.

22. **(Original)** The method of claim 20, wherein feeding the output voltage into a microprocessor comprises using a voltage divider to feed a percentage of the output voltage into the analog to digital converter.

23. **(Previously Presented)** The boost converter of claim 12, wherein different gains are programmed into the means for controlling for operation at different states.

24. **(Previously Presented)** The boost converter of claim 18, wherein different gains are programmed into the microprocessor for operation at different states.